

Appln. No. 10/711,685  
Docket No. PES-D-03-025/PES-0220

RECEIVED  
CENTRAL FAX CENTER  
JAN 29 2007

## REMARKS / ARGUMENTS

### Status of Claims

Claims 1-25 are pending in the application and stand rejected. Applicant has canceled Claims 24 and 25, and has amended Claims 1, 13 and 20, leaving Claims 1-23 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §112, first paragraph, 35 U.S.C. §102(b), and 35 U.S.C. §103(a), have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

These amendments and accompanying remarks were not presented earlier because Applicant did not fully appreciate the nature of the Examiner's position until the Applicant was advised in more detail of the position by the final rejection. The claim amendments presented herein, which Applicant respectfully requests entry thereof, should require only a cursory review by the Examiner as they either cancel claims, include clarifying language, or include only elements presented in earlier examined claims.

### Rejections Under 35 U.S.C. §112, First Paragraph

Claims 1-25 stand rejected under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement.

The Examiner alleges that the claims contain subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Appellant respectfully disagrees with the Examiner's rejection for the following reasons.

As indicated in this Office Action at page 3, the Examiner is favorably disposed to remove the new matter rejection if Applicant reinstated previously deleted claim language.

At the outset, Applicant respectfully disagrees that the claims have introduced new matter, as antecedent support for the claim language can be found in the application

Appl. No. 10/711,685  
Docket No. PES-D-03-025/PES-0220

as originally filed, such as at Paragraph 33 which describes diffusion bonding and therefore inherently discloses a metallic seal. However, in an effort to advance this case to allowance, Applicant has amended the independent claims as set forth above to include the previously deleted claim language as suggested by the Examiner.

Regarding Claims 24 and 25, Applicant respectfully disagrees that the claims include subject matter not supported by the specification, as antecedent support can be found in Figure 5 and accompanying text (illustrating and describing a bond line defined by bond line portions 315, 281 and 286 that result in the absence of bonding plurality of through-hole channels), and at Figure 4 and accompanying text (illustrating and describing a laminated arrangement having features that include through-hole channels and ports). However, in an effort to advance this case to allowance, without prejudice or intent of waiving rights to patentable subject matter, Applicant has canceled Claims 24 and 25, thereby overcoming this rejection.

Accordingly, and in view of the foregoing, Applicant respectfully submits that the specification as originally filed provides general guidelines as to the scope of the invention such that one of ordinary skill in the art would know what was meant, and that the subject matter of the invention has been described and is supported in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention, and therefore respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §112, first paragraph.

**Rejections Under 35 U.S.C. §102(b), alternatively Under 35 U.S.C. §103(a)**

Claims 1-3, 8-13 and 16-25 stand rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Spear (U.S. Patent No. 6,051,331, hereinafter Spear).

Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a*

Appln. No. 10/711,685  
Docket No. PES-D-03-025/PES-0220

*single prior art reference.*” *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, “[t]he identical invention must be shown in as complete detail as is contained in the \*\*\* claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements “arranged as in the claim.” *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

Alternatively, Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

Applicant has amended independent Claims 1, 13 and 20 to reinstate previously deleted language, and to now include, inter alia, limitations directed to “the first bond line having a first portion that extends partially around the perimeter of the first plurality of channels, a second portion that extends partially around the perimeter of the first inlet port and a third portion that extends partially around the perimeter of the first outlet port, the first portion of the first bond line being integral with the second and third portions of the first bond line”.

No new matter has been added as antecedent support can be found in the application as originally filed, such as at Paragraph 33, disclosing inlet 280 and outlet 285 ports of first layer 245 have sealing lines (second and third portions) 281, 286 that are integral with sealing line (first portion) 315 of first active area 310, and at Figure 5, disclosing each of the first, second and third portions of the bond line extending only

Appln. No. 10/711,685  
Docket No. PES-D-03-025/PES-0220

partially around the respective features of first active area 310, inlet port 280, and outlet ports 285.

Dependent claims inherit all of the limitations of the respective parent claim.

On page 3 of the present Office Action, the Examiner comments that "Although Fig. 5 depicts a seal around the periphery of the plate, the claim language needs to be constructed by what is present, and not by what is not present."

While Applicant believes that claim language complies with statutory requirements where it describes the claimed invention in negative terms rather than positive terms, Applicant has nonetheless in an effort to advance this case to allowance amended the independent claims to further define the claimed invention by what is present rather than by what is not present, as suggested by the Examiner.

In comparing the claimed invention with Spear, Applicant finds Spear to disclose and teach diffusion bonding that is non-discriminatory with respect to a defined bond line. For example, at Column 17, lines 31-56, Applicant finds Spear to describe a bonding process that does not control a precise location of a bond line such that the resulting bond line has a first portion that extends partially around the perimeter of the first plurality of channels, a second portion that extends partially around the perimeter of the first inlet port and a third portion that extends partially around the perimeter of the first outlet port, the first portion of the first bond line being integral with the second and third portions of the first bond line, as claimed.

At Paragraph 35, Applicant describes how the bond line of the present invention allows the active area 310 to be sealed independent of the ports 280, 285, 290, 295, thereby resulting in a lower cell construction cost, which is an advantage not contemplated by Spear.

Furthermore, if Applicant were to agree that the Spear sealing ridges (not shown) (col. 10, lines 43-44) were synonymous with the claimed metallic seals, Applicant submits that the claimed limitations of the instant invention would still not be met, as the Spear sealing ridges are not disclosed as comprising material from the first layer and the third layer (first metallic seal), or from the second layer and the third layer (second

Appln. No. 10/711,685  
Docket No. PES-D-03-025/PES-0220

metallic seal), and the Spear sealing ridges are not defined as having integrally arranged first, second and third portions that extend only partially around the perimeter of a respective flow feature.

Additionally, at page 8 of the present Office Action, the Examiner comments that "the anode flow field spacer platelet necessarily outlines the active area channels, humidification channels, and the manifolds that form a bond line." If Applicant were to agree with the Examiner on this point, it would necessarily follow that Spear does not disclose or teach a sealing that only *partially* outlines the various flow features, as by the Examiner's own analysis, the Spear sealing "outlines" (in totality) the various flow features.

Accordingly, Applicant submits that Spear does not disclose all of the claimed elements arranged as in the claim, and absent anticipatory disclosure in Spear of each and every element of the claimed invention arranged as in the claim, Spear cannot be anticipatory.

Furthermore, Applicant submits that Spear fails to teach or suggest each and every element of the claimed invention arranged so as to perform as the claimed invention performs, and therefore cannot establish a prima facie case of obviousness.

In addition to the foregoing, Applicant submits that Claim 1 and the other independent claims have been amended merely to include the limitation of now canceled Claim 24, but in alternative language, that essentially calls for an invention having metallic bonding that defines a seal, where the metallic bonding is partially present around the periphery of the active area 310 and is absent in the region of the active area 310.

In view of the amendment and foregoing remarks, Applicant submits that Spear does not disclose, teach or suggest, each and every element of the claimed invention arranged as claimed, or arranged so as to perform as the claimed invention performs, and therefore cannot be anticipatory or establish a prima facie case of obviousness. Accordingly, Applicant respectfully submits that the Examiner's rejection under 35

Appln. No. 10/711,685  
Docket No. PES-D-03-025/PES-0220

U.S.C. §102(b), or in the alternative under 35 U.S.C. §103(a), has been traversed, and requests that the Examiner reconsider and withdraw of these rejections.

**Rejections Under 35 U.S.C. §103(a)**

Claims 4, 5 and 14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Spear in view of Wilson (U.S. Publication No. 2004/0197630, hereinafter Wilson).

Claims 6, 7 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Spear as applied to appropriate claims above, and further in view of Toshihiro (JP 05-251097, hereinafter Toshihiro).

Applicant traverses these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

Dependent claims inherit all of the limitations of the respective parent claim and any intervening claim.

In view of Wilson and Toshihiro not being applied against Claims 1, 13 or 20, in view of the amendments set forth above with regard to Claim 1, 13 and 20, and in view of the subject claims being dependent upon one of the amended parent claims, Applicant submits that Claims 4-7 and 14-15 are allowable at least for the reason that they depend from an allowable claim.

Additionally, Applicant submits that Wilson and Toshihiro fail to cure the deficiencies of Spear at least with respect to the amendments set forth above, and therefore fail to establish a prima facie case of obviousness.

In view of the foregoing, Applicant submits that the References fail to teach or suggest each and every element of the claimed invention and are therefore wholly

Appln. No. 10/711,685  
Docket No. PES-D-03-025/PES-0220

inadequate in their teaching of the claimed invention as a whole, fail to motivate one skilled in the art to do what the patent Applicant has done, fail to recognize a problem recognized and solved only by the present invention, fail to offer any reasonable expectation of success in combining the References to perform as the claimed invention performs, and discloses a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

Applicant has amended the claims for presentation in better form for consideration on appeal, and to more clearly reflect Applicant's invention. The claim amendments should only require a cursory review by the Examiner as they only include language presented in earlier examined claims.

In light of the foregoing remarks and amendments, Applicant respectfully submits that the proposed amendments and arguments comply with 37 C.F.R. §1.116 and should therefore be entered, and with their entry that the Examiner's rejections under 35 U.S.C. §112, first paragraph, 35 U.S.C. §102(b), and 35 U.S.C. §103(a), have been traversed, and that the application is now in condition for allowance. Such action is therefore respectfully requested.

The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 06-1130.

Appln. No. 10/711,685  
Docket No. PES-D-03-025/PES-0220

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,

CANTOR COLBURN LLP

Applicant's Attorneys

By: /David Arnold/

David Arnold  
Registration No: 48,894  
Customer No. 23462

Address: 55 Griffin Road South, Bloomfield, Connecticut 06002  
Telephone: (860) 286-2929  
Fax: (860) 286-0115